IT Unit 3

Topic 1

# Organisations & Data Management

**Developing a RDBMS, p 45**

1. In which stage of the PSM does this occur?

After database designs are complete and during the development stage

1. What is meant by referential integrity?

Appling referential integrity is introducing the presence of foreign keys

**Testing the solution, p 49**

1. What is the purpose of testing?

Testing the product is done to ensure that all features and functions work correctly and that the information produced is free of errors

1. Distinguish between informal and formal testing.

Informal testing occurs during the **development stage.** As software developers create a solution, they are constantly testing to see if the solution behaves accordingly to expectations.

Formal testing involves testing the overall solution after it has been completed to see if it solves the problem.

1. What is a bench test?

A bench test forms part of the formal testing process in which sample data that has been developed during the design stage is used to determine how the solution behaves with the range of data

1. What is a test plan and what are the benefits of having a test plan?

A test plan is a technique for recording tasks to be carried out and the results of the tests ; typically, a test plan stares the type of test, what test data will be used, what result are expected and the actual results which ensures proper operation in a solution.

1. What is meant by user acceptance testing?

User acceptance testing involves asking users to follow a series of steps to complete a task in the solution or interpreting the information contained in the output, then providing feedback to the developers.

**Testing procedure:**

The test plan is used to allow a systematic check of each part of the solution to ensure its proper operation. It involves six steps (three at design stage & three at development stage:

1. Decide on tests to be conducted (design stage).
2. Determine the test data (design stage).
3. Determine expected results (design stage).
4. Record results of testing (develop stage).
5. Correct any errors (develop stage).
6. Provide concluding statement (develop stage).

**Features to test:**

1. Testing table validation
   1. What is the purpose of testing validation?

Testing validation first ensures that the data is data is accurate before it is entered via forms or queries are run

* 1. What is the rule of thumb in testing data values?

A simple rule of thumb is to rest a value itself and one value greater than the value in the validation rule

1. Testing the query selection criteria
   1. In testing the queries, why must the test data be chosen carefully?

The test data must be chosen carefully to ensure that there are some records that should be returned by the query, some that should be rejected for failing to meet the first criterion even though they meet the second criterion, some that fail to meet the second after meeting the first criterion and finally some that miss both criteria.

1. Testing formulas and summary statistics

It is also critical to test formulas and summary statistics (such as counts and sums) that occur in your queries. Choose appropriate test data so that is easy to determine if the final result is accurate

1. Testing sorting, primary & secondary

A key feature is being able to display its results in an organised and usable manner(information) these primary and secondary sorts have to be tested. The key is to demonstrate that a sort works alphabetically or numerically. You will need to lest three values to demonstrate this adequately.